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EXAMINER	
SUN, XIUQIN	
ART UNIT	**PAPER NUMBER**
2863	

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/032,494	NAGAMATSU, BRIAN H.	
	Examiner	Art Unit	
	Xiuqin Sun	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23, 25-53 and 55-61* is/are rejected.

7)☒ Claim(s) *24 and 54* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/26/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-8, 12, 19-23, 26-34, 37-43, 53 and 56-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canada et al. (U.S. Pat. No. 5854994).

Canada et al. teach a system comprising: a remotely situated plurality of sensors that sense information (Figs. 1 and 3; col. 5, lines 6-35 and lines 45-64); a locally situated workstation that receives the information from the remotely situated plurality of sensors in the form of a set of data (Figs. 1 and 4; col. 5, lines 6-35; cols. 6-7, lines 64-8 and cols. 7-8, lines 60-9); and a Fast Fourier Transform (FFT) analyzer interfaced with the plurality of sensors and workstation to receive information from the plurality of sensors in the form of time domain data points, to transform the data points into frequency domain data points prior to transmission as a set of data from the plurality of sensors to the locally situated workstation (Fig. 3; col. 6, lines 27-46). Canada et al. further teach that: said FFT analyzer is interfaced with the workstation to receive an input from the workstation to control the plurality of sensors (Fig. 3; col. 7, lines 9-28);

the plurality of sensors monitors a test object and generates sensor signals (Figs. 1-3; col. 5, lines 6-64); the plurality of sensors monitors a test object and generates sensor signals, the system further comprising a data acquisition system that acquires the sensor signals from the plurality of sensors and digitizes the plurality of sensors into a digitized sensor data signal using an analog-to-digital converter device (Figs. 1-3; cols. 5-6, lines 6-16); the plurality of sensors comprise a vibration sensor (col. 5, lines 6-20); the plurality of sensors comprise a vibration sensor selected from the group consisting of an accelerometer, a proximity

probe and a fiber optic accelerometer (col. 5, lines 45-64); the plurality of sensors comprise a temperature sensor selected from the group consisting of a thermocouple, a thermistor, an RTD and an infrared sensor (col. 5, lines 45-64); the plurality of sensors comprise a time code generator that provides a measure of time (Fig. 3 and col. 6, lines 7-16); a central control system that includes an alarm apparatus that generates an alarm trigger whenever a sensed digitized data signal exceeds a selected alarm threshold (col. 6, lines 27-46); said workstation comprises an output device selected from the group consisting of a plotter and a color printer (col. 12, lines 23-31); said workstation comprises a processing device and a storage device selected from the group consisting of a hard disk, a writable CD and a flexible disk (cols. 7-8, lines 60-9); said workstation comprises an input device selected from the group consisting of a keyboard, a mouse and a wireless mouse (cols. 7-8, lines 60-9); said FFT is remotely situated in association with the plurality of sensors (col. 5, lines 45-64); a switching apparatus remotely situated and controllably connected to the plurality of sensors to

permit selection of a sensor of the plurality from the workstation (col. 6, lines 17-35; col. 9, lines 21-45 and col. 12, lines 33-39).

Canada et al. further teach a system and method, comprising: a remotely situated sensor that senses information (Figs. 1 and 3; col. 5, lines 6-35 and lines 45-64); a remotely situated data acquisition system interfaced with the sensor to receive data from the sensor (Fig. 3; cols. 5-6, lines 45-46); a Fast Fourier Transform (FFT) analyzer interfaced with the sensor in parallel with the data acquisition system to receive information from the sensor in the form of time domain data points and to transform the data points into frequency domain data points to facilitate transmission (Fig. 3; col. 6, lines 27-46); and a locally situated workstation that receives the data from the data acquisition system, that receives the frequency domain data points from the FFT analyzer and that controls the sensor via input in response to the data and data points (Figs. 1 and 4; col. 5, lines 6-35; cols. 6-7, lines 64-28 and cols. 7-8, lines 60-9). Canada et al. further teach the means and steps of: monitoring a test object with the plurality of sensors, generating sensor signals from the monitoring and acquiring the sensor signals with a data acquisition system that digitizes the plurality of sensors into digitized sensor data signals (Figs. 1, 3 and cols. 5-6, lines 45-6); said plurality of sensors generate vibration data points (col. 5, lines 6-20); said plurality of sensors generate temperature data points (col. 5, lines 45-64).

Canada et al. further teach a system, comprising: a remotely situated plurality of sensors that sense information to generate digitized sensor signals (Figs. 1 and 3; col. 5, lines 6-35, lines 45-67 and col. 6, lines 1-6); a data acquisition system for acquiring

the digitized sensor signals from the plurality of sensors (col. 6, lines 7-16); an interface device associated with the data acquisition system that converts the digitized sensor signals into an output data signal transmission stream (col. 6, lines 27-46); a transmission apparatus that transmits the output data signal transmission stream from the interface device (Fig. 3; cols. 6-7, lines 64-8); a local interface device situated remote from the sensors that receives the output data signal transmission stream from the transmission apparatus and converts the output data signal transmission stream into a digital central control system data input (Figs. 1, 4; cols. 7-8, lines 60-9); a central control system that receives the digital central control system data input and sends the data input as a set of central processed data (Figs. 1, 4; cols. 7-8, lines 60-9 and col. 12, lines 23-39); a central processing transmission apparatus that relays the sent set of central processed data (col. 12, lines 23-39); a locally situated workstation that receives the sent set of central processed data from the central processing transmission apparatus (Figs. 1, 4; cols. 7-8, lines 60-9 and col. 12, lines 23-39); and a Fast Fourier Transform (FFT) analyzer interfaced with the plurality of sensors and workstation to receive information from the plurality of sensors in the form of time domain data points, to transform the data points into frequency domain data points that can be digitized by the interface device to facilitate transmission as a set of output data signal transmission stream from the plurality of sensors to the transmission apparatus (Fig. 3; col. 6, lines 27-46). The teaching of Canada et al. further includes: a central storage device for storing the digital central control system data input, a central processing system for analyzing the digital central control system data and for generating a set of central

processed data and a central output device for sending the set of central processed data (Figs. 3, 6, cols. 5-7, lines 45-28); a switching apparatus remotely situated and controllably connected to the plurality of sensors to permit selection of a sensor of the plurality from the workstation (col. 6, lines 17-35; col. 9, lines 21-45 and col. 12, lines 33-39); said workstation receives the relayed set of central processed data from the central transmission apparatus and receives an input in response to the central processed data and transmit a signal to the switching apparatus to control the plurality of sensors (col. 6, lines 17-35; col. 9, lines 21-45 and col. 12, lines 33-39); said remote data acquisition system further includes a remote data acquisition processing device for analyzing the digitized sensor data signal and a remote data acquisition storage device for storing the digitized sensor data (Figs. 1, 3, 6, cols. 5-7, lines 45-28); sensing the frequency domain data points at the workstation and generating an alarm whenever a sensed digitized data signal exceeds a selected alarm threshold (col. 12, lines 23-39).

Canada et al. further teach a method, comprising: remotely monitoring an operating test object with a plurality of sensors to generate sensor signals (Figs. 1 and 3; col. 5, lines 6-35, lines 45-64); remotely digitizing the sensor signals (cols. 5-6, lines 45-6); remotely converting the digitized sensor signals into an output data signal transmission stream (col. 6, lines 27-46); transmitting the output data signal transmission stream to a local interface device (col. 6, lines 27-46); converting the output data signal transmission stream at the local interface device into a digital central control system data input (Fig. 3; cols. 6-7, lines 64-8); sending the set of the central transmission processed data through a central processing transmission apparatus to a

workstation (Fig. 3; cols. 6-7, lines 64-8); displaying the set of central transmission processed data at a workstation display wherein an operator views the processed data (col. 7-8, lines 60-9 and col. 12, lines 23-39); selecting a sensor and inputting a selected sensor command according to the displayed set of central transmission processed data (col. 6, lines 17-35; col. 9, lines 21-45 and col. 12, lines 33-39); transmitting the selected sensor command through the central processing transmission apparatus to a remote controlled switching apparatus (col. 6, lines 17-35; col. 9, lines 21-45 and col. 12, lines 33-39); and selecting a sensor according to the selected sensor command in the remote controlled switching apparatus (col. 6, lines 17-35; col. 9, lines 21-45 and col. 12, lines 33-39). Canada et al. further teach the method steps of: determining a threshold sensor signal level (col. 6, lines 27-46); comparing the selected sensor signal with the threshold sensor signal level (col. 6, lines 27-46); and terminating operation of the test object when the threshold sensor signal level is reached or exceeded according to the comparison (col. 6, lines 27-46 and col. 12, lines 23-39); determining a threshold sensor signal level (col. 6, lines 27-46); comparing the selected sensor signal with the threshold sensor signal level in the digitized FFT analyzer (col. 6, lines 27-46); terminating operation of the test object when the threshold sensor signal level is reached or exceeded according to the comparison of the display (col. 6, lines 27-46); and analyzing the digital central control system data to generate a set of central processed data and storing the set in an FFT memory device (col. 6, lines 27-46).

Canada et al. do not mention explicitly: said FFT analyzer transforming the data points into a lesser number of frequency domain data points to facilitate transmission as

a set of data to said workstation; said workstation comprises an audio monitoring system which is selected from the group consisting of a speaker, a surround sound speaker system, and a headphone; said workstation comprises an e-mail message system as one of the output devices; said system is used to monitor a test object selected from the group consisting of a steam turbine, a gas turbine, a generator, a heat recovery boiler, an aircraft engine and a gear unit.

It is well known in the art of FFT technique that any finite time series may be represented as a combination of a finite number of frequency domain data points. The number of frequency domain data points of interest can then be selected by an on-demand truncation of the Fourier harmonic series according to a predetermined accuracy of the transform. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select any required number of data points in the frequency domain to represent the original measurement in the time domain in order to facilitate the subsequent data analysis or transmission. It is deemed that the system taught by Canada et al. is board enough to cover the above limitation recited in claim 1 of the current application.

Referring to claims 20 and 21, the Examiner takes official notice that the inclusion of an audio monitoring system which is selected from the group consisting of a speaker, a surround sound speaker system, and a headphone in a workstation is well known in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the workstation audio monitoring system in the system of Canada et al. in order to send an audio alarm or sensor signal to the user

whenever needed, since it is a common knowledge and well known practice to communicate with a user of a workstation or a PC via an audio system.

Referring to claim 22, the Examiner takes official notice that the use of an email-message system is well known in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include these a features in the system of Canada et al. in order to report results to remote users, since it is a common knowledge and well known practice to communicate with remote a user with an automatic email operation wherever needed.

Referring to claim 26, it is obvious to one having ordinary skill in the art at the time the invention was made that the system taught by Canada et al. is broad enough to be applied to any machinery including one selected from the group consisting of a steam turbine, a gas turbine, a generator, a heat recovery boiler, an aircraft engine and a gear unit. In view of the teaching of by Canada et al., one having ordinary skill in the art would be able to merely apply the same technique to any test object selected from the group consisting of a steam turbine, a gas turbine, a generator, a heat recovery boiler, an aircraft engine and a gear unit. It has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See

In re Casey, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

3. Claims 9 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canada et al. in view of McGirr et al. (U.S. Pat. No. 5736937).

Canada et al. teach a system that includes the subject matter discussed above. Canada et al. do not mention explicitly: said plurality of sensors comprise a probe that provides a once per revolution signal.

McGirr et al. teach an apparatus for wireless transmission of shaft position information, comprising: a probe that provides a once per revolution signal (col. 2, lines 16-45).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of McGirr et al. in the invention of Canada et al. in order to accurately monitor the shaft position information as a measurement for the performance of a rotating machinery (McGirr et al., Abstract).

4. Claims 10, 11, 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canada et al. in view of Trolinger et al. (U.S. Pat. No. 5682236).

Canada et al. teach a system that includes the subject matter discussed above. Canada et al. do not mention explicitly: said plurality of sensors comprise a strain measurement sensor; said strain measurement sensor is selected from the group consisting of a strain gauge and a thermal strain system; and said plurality of sensors generate measurement signal data points.

Trolinger et al. teach a system and method for remote measurement of near-surface physical properties using optically smart surfaces, comprising: a strain measurement sensor which is selected from the group consisting of a strain gauge and a thermal strain system, wherein measurement signal data points are generated (col. 7, lines 18-30; col. 9, lines 60-67 and col. 10, lines 1-25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Trolinger et al. in the invention of Canada et al. in order to monitor the mechanical and thermal strain condition of the test object (Trolinger et al., col. 1, lines 64-67 and col. 2, lines 1-29).

5. Claims 13, 14, 16 and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canada et al. in view of Lang et al. (U.S. Pat. No. 5521482).

Canada et al. teach a system that includes the subject matter discussed above. Canada et al. do not mention explicitly: said plurality of sensors comprise a voltage sensor, a current sensor and a pressure sensor; and generate time coded signal data points.

Lang et al. teach a method and apparatus for determining mechanical performance of polyphase electrical motor systems, comprising: a voltage sensor (col. 4, lines 6-34; col. 19, lines 35-67 and col. 20, lines 1-11); a current sensor (col. 4, lines 6-34; col. 19, lines 35-67 and col. 20, lines 1-11); and a pressure sensor (col. 7, lines 1-25); wherein time coded signal data points are generated (Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Lang et al. in the invention of Canada et

al. in order to determine electrical and mechanical performance characteristics of a test object such as a polyphase electric motor system (Lang et al., Abstract).

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Canada et al. in view of Milkovic (U.S. Pat. No. 4286214), Robert C. Miller (U.S. Pat. No. 4255707) and Felgenhauer (U.S. Pat. No. 5602708).

Canada et al. teach a system that includes the subject matter discussed above. Canada et al. do not mention explicitly: said plurality of sensors comprise a current sensor selected from the group consisting of a Watt meter, a VAR meter and a speed meter.

Milkovic teaches the use of a Watt meter as a current sensor (col. 1, lines 15-51 and col. 7, lines 39-51).

Robert C. Miller teaches the use of VAR meter as a current sensor (col. 2, lines 57-67; col. 3, lines 1-23 and col. 19, lines 51-62).

Felgenhauer teaches the use of a speed meter as a current sensor (col. 3, lines 24-41 and lines 62-67 and col, 4, lines 1-12 and lines 40-56)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teachings of Milkovic, Robert C. Miller and Felgenhauer in the invention of Canada et al. in order to provide a plurality of different approaches to measure the electric current signal of the object under test (Milkovic, col. 1, lines 15-51 and col. 7, lines 39-51); (Robert C. Miller, col. 2, lines 57-67; col. 3, lines 1-23 and col. 19, lines 51-62); (Felgenhauer, col. 3, lines 24-41 and lines 62-67 and col, 4, lines 1-12 and lines 40-56).

7. Claims 17 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canada et al. in view of Niel Miller (U.S. Pub. No. 20020169569).

Canada et al. teach a system that includes the subject matter discussed above. Canada et al. do not mention explicitly: said plurality of sensors comprise a microphone which generates sound signal data points.

Niel Miller teaches a system and method a system and method for analyzing vibration signals, comprising: a microphone which generates sound signal data points (section 0024-0025).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Niel Miller in the invention of Canada et al. in order to provide an alternative for monitoring and analyzing vibration signals in a test object (Niel Miller, Abstract and section 0024-0025).

8. Claims 18 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canada et al. in view of Pryor et al. (U.S. Pat. No. 5004339).

Canada et al. teach a system that includes the subject matter discussed above. Canada et al. do not mention explicitly: said plurality of sensors comprise a camera which generates visual signal data points.

Pryor et al. teach a method and apparatus for determining physical characteristics of objects and object surfaces, comprising a video camera which generates visual signal data points for sensing the test object (col. 6, lines 1-13 and lines 34-67 and col. 11, lines 27-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Pryor et al. in the invention of Canada et al. in order to determine physical characteristics of test objects and object surfaces (Pryor et al., Abstract).

9. Claims 25 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canada et al. in view of DeVito (U.S. Pub. No. 20010056225) and Smith, Jr. et al. (U.S. Pat. No. 6687654).

Canada et al. teach a system that includes the subject matter discussed above. Canada et al. do not mention explicitly: said FFT analyzer comprises a display of averaged data to reduce random signal fluctuations.

DeVito teaches a technique for performing real-time FFT analysis of bioelectrical signals, comprising: a display selected from the spectral amplitude versus frequency display and a waterfall display (section 0049).

Smith, Jr. et al. teach techniques for distributed machinery monitoring, comprising a FFT analyzer for preprocessing the acquired data, wherein the FFT analyzer comprises a display of averaged data to reduce random signal fluctuations (col. 12, lines 44-67; col. 13, lines 1-43; col. 16, lines 56-67; col. 17, lines 1-3 and col. 18, lines 44-58).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of DeVito and Smith, Jr. et al. in the invention of Canada et al. in order to carry out a preprocessing process on the input data points before transforming the data points into frequency domain (Smith, Jr. et al.,

col. 12, lines 44-67; col. 13, lines 1-43; col. 16, lines 56-67; col. 17, lines 1-3 and col. 18, lines 44-58).

10. Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canada et al. in view of Leamy et al. (U.S. Pub. No. 20030066352), Lofall et al. (U.S. Pat. No. 6484109), Discenzo (U.S. Pat. No. 6434512) and Dungan (U.S. Pat. No. 6670887).

Canada et al. teach a system that includes the subject matter discussed above. Canada et al. also explicitly state that: said transmission apparatus comprises a RF wireless connection. Canada et al. do not mention: said transmission apparatus comprises a transmission link selected from an Internet connection, a DSL connection, an HPIB connection, a wireless connection and a satellite connection; a carrier selected from the group consisting of an Internet connection, a Local Area Network, a cable connection, a GPIB, an ethernet connection and a wireless connection.

It is obvious that a transmission link selected from an Internet connection, a DSL connection, an HPIB connection, a wireless connection and a satellite connection and a carrier selected from the group consisting of an Internet connection, a Local Area Network, a cable connection, a GPIB, an ethernet connection and a wireless connection are well known in the art. In view of the teaching of Canada et al., it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the RF transmission transmitters and receivers in the Canada system with a different transmission link selected from an Internet connection, a DSL connection, an HPIB connection, and a satellite connection provided by a carrier selected from the

group consisting of an Internet connection, a Local Area Network, a cable connection, a GPIB, and an ethernet connection in order to make the system more scalable, flexible and reliable for transmitting data between the remote monitors and the local host computer, as suggested by Leamy et al. (U.S. Pub. No. 20030066352, section 0023), Lofall et al. (col. 5, lines 14-44 and lines 60-67 and col. 6, lines 1-41), Discenzo (col. 3, lines 59-67 and col. 4, lines 1-20) and Dungan (col. 6. lines 50-67 and col. 7, lines 1-48).

Allowable Subject Matter

11. Claims 24 and 54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance

12. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claim 24 is the inclusion of the limitation that said FFT analyzer comprises a display selected from the group consisting of spectral amplitude versus frequency display, an octave display, a 1/3 octave display, a 1/6 octave display, a 1/12 octave display, a 1/24 octave display, an at least 100 line display and a waterfall display. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claim 54 is the inclusion of the claimed method step of generating a display from the time domain data points, the display comprising a spectral amplitude versus frequency display, an octave display, a 1/3 octave display, a 1/6 octave display, a 1/12 octave display, a 1/24 octave display, an at least 100 line display or a waterfall display. It is this step found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280. The examiner can normally be reached on 7:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Xiuqin Sun
Examiner
Art Unit 2863

XS

February 27, 2004

John Barlow
Supervisory Patent Examiner
Technology Center 2800